Happyboard Assembly

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Introduction

The Happyboard requires a small amount of soldering before we can begin using it. A few components need to be soldered to the board. While soldering, please refer to Figure 1 and the demo board outside the office.

Package Contents

Before we get started, you will need the following items, which are in your kit:

- The Happyboard
- A Bag of electronic components
  - 3x 20-pin DIP socket
  - 1x 16x2 LCD Display
  - 1x piezo beeper
  - 1x “Frobknob” Potentiometer
- Male header, from lab
  - 3x 6x1 pin
  - 1x 14x1 pin
- Female header, from lab
  - 3x 6x1 pin
  - 1x 4x1 pin
  - 1x 8x1 pin
  - 1x 14x1 pin
  - 1x 16x1 pin
  - 1x 4x2 pin
  - 1x 8x2 pin
  - 1x 16x2 pin

If you are missing any of these components, please check with an organiser.
Figure 1: Parts to solder
**Board Assembly**

1. Solder the Frobknob (round black potentiometer) on the right edge of the board.
2. Solder the blue piezo beeper at the top of the board.
3. Solder the 3 20 pin DIP sockets, noting the orientation.
4. Solder the 3 6x1 male header, using a servo to ensure they are aligned.
5. Solder the 3 6x1 female header (top left) for the motor ports.
6. Solder the 6 female headers along the bottom edge of the board. To ensure the header is aligned correctly, insert the 2 wide block as well as the 1 wide block and hold them in place with one of the 1x6 male headers.
7. Solder the last of the female header, the 14x1 LCD connector.
8. The LCD can now be plugged into the 14 pin header.

Once all the components are soldered, please check the board with an organiser before continuing.